

CLAIMS:

1. (Currently amended) A unilimb multilumen respiratory circuit comprising first and second conduits, each of said conduits having a proximal and a distal end, wherein said proximal end of said first conduit can be operatively connected to an inlet for respiratory gases and said second conduit can be operatively connected to an outlet for respiratory gases, wherein said first conduit comprises pleated tubing and said second conduit comprises pleated tubing, said conduits being connected at their distal ends to a common distal fitting, wherein said first and second conduits meet the flow requirements and compliance required for spontaneous and assisted ventilation, and wherein said distal fitting can be detachably connected directly to a patient airway device selected from the group consisting of a mask, an endotracheal tube, a laryngeal mask, a laryngeal tube, and a nasal tube, wherein axial extension or contraction of said distal end of said second conduit causes a corresponding axial extension or contraction of said distal end of said first conduit, wherein upon axial extension of said distal end of said second conduit from a first compressed axial conformation to a second expanded axial conformation, or vice versa, said second conduit will retain said second conformation, and wherein said first conduit will expand or contract in length with corresponding axial expansion or contraction of said second conduit, wherein said proximal end of said first conduit is connected to said proximal end of said second conduit via a common proximal fitting or proximal terminal, wherein axial extension or contraction will adjust the volume therein of at least one of said first or second conduits.

Claims 2 -11. (Canceled).

12. (Currently amended) The circuit of claim 1-5, wherein the length of said first tube can be longer than said second tube when the length of said first tube is not constrained by mutual connection with said second tube to said fittings or said distal fitting and said proximal terminal.

Claims 13 -14 (Canceled).

15. (Previously presented) The circuit of claim 1, wherein the amplitudes or wavelengths of the pleats of said first and second tube are proportional in size.

16. (Original) The circuit of claim 1, wherein said first and second conduits have resistance to flow of less than about 6 cm H₂O at flow rates of up to about 60 L/min.

17. (Canceled).

18. (Currently amended) The circuit of claim 1-4, wherein at least a portion of said first conduit is contained within said second conduit.

19. (Canceled).

20. (Previously presented) The circuit of claim 18, wherein said at least a portion of said first conduit contained within said second conduit is coaxial therewith.

21. (Canceled).

22. (Currently amended) The circuit of claim 1-4, wherein said proximal fitting or proximal terminal comprises at least two lumens each having filters therein to provide for independent filtration of fluid passing to or from said first and second conduits via said proximal fitting or proximal terminal.

Claims 23 – 24 (Canceled).

25. (Currently amended) The circuit of claim 18 ~~47~~, wherein said proximal fitting or proximal terminal comprises at least two lumens each having filters therein to provide for independent filtration of fluid passing to or from said first and second conduits via said proximal fitting or proximal terminal.

26. (Original) A ventilation or anesthesia system, comprising the unilimb multilumen respiratory circuit of claim 1.

27. (Canceled).

28. (Canceled).

29. (Original) A ventilation or anesthesia system, comprising the unilimb multilumen respiratory circuit of claim 20.

30. (Canceled).

31. (Canceled).

32. (Previously presented) A ventilation or anesthesia system, comprising the unilimb multilumen respiratory circuit of claim 22.